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## PATENT COOPERATION TREATY

## PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY  
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference P62604	<b>FOR FURTHER ACTION</b>		See Form PCT/IPEA/416
International application No. <b>PCT/CA2004/001555</b>	International filing date ( <i>day/month/year</i> ) 24 August 2004 (24-08-2004)	Priority date ( <i>day/month/year</i> ) 25 August 2003 (25-08-2003)	
International Patent Classification (IPC) or national classification and IPC IPC(7): A01N 57/10, A01N 31/00, A01N 65/00, C05G 3/00, G01N 21/80, G01N 21/78, G01N 33/84, A01N 25/00			
Applicant <b>NUTRIAG LTD. ET AL</b>			
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <b>4</b> sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input type="checkbox"/> (<i>sent to the applicant and to the International Bureau</i>) a total of sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. 1 and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (<i>sent to the International Bureau only</i>) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p> <p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the report</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input checked="" type="checkbox"/> Box No. VIII Certain observations on the international application</p>			
Date of submission of the demand <b>29 March 2005 (29-03-2005)</b>	Date of completion of this report <b>20 December 2005 (20-12-2005)</b>		
Name and mailing address of the IPEA/CA Canadian Intellectual Property Office Place du Portage I, C114 - 1st Floor, Box PCT 50 Victoria Street Gatineau, Quebec K1A 0C9 Facsimile No.: 001(819)953-2476	Authorized officer  <b>Marc De Vleeschauwer (819) 956-6127</b>		

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.  
PCT/CA2004/001555

## Box No. I Basis of the report

1. With regard to the language, this report is based on:

the international application in the language in which it was filed  
 a translation of the international application into translation furnished for the purposes of:  
 international search (Rules 12.3(a) and 23.1(b))  
 publication of the international application (Rule 12.4(a))  
 international preliminary examination (Rules 55.2(a) and/or 55.3(a))

, which is the language of a

2. With regard to the elements of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

 the international application as originally filed/furnished the description:

pages received by this Authority on as originally filed/furnished  
 pages\* received by this Authority on  
 pages\*

 the claims:

pages as originally filed/furnished  
 pages\* as amended (together with any statement) under Article 19  
 pages\* received by this Authority on  
 pages\* received by this Authority on

 the drawings:

pages received by this Authority on as originally filed/furnished  
 pages\* received by this Authority on  
 pages\*

 a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.

3.  The amendments have resulted in the cancellation of:

the description, pages  
 the claims, Nos.  
 the drawings, sheets/figs  
 the sequence listing (*specify*):  
 any table(s) related to sequence listing (*specify*):

4.  This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

the description, pages  
 the claims, Nos.  
 the drawings, sheets/figs  
 the sequence listing (*specify*):  
 any table(s) related to sequence listing (*specify*):

\* If item 4 applies, some or all of those sheets may be marked "superseded."

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## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.  
PCT/CA2004/001555

## Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

## 1. Statement

Novelty (N)	Claims	<u>1-5</u>	YES
	Claims	<u>none</u>	NO
Inventive step (IS)	Claims	<u>none</u>	YES
	Claims	<u>1-5</u>	NO
Industrial applicability (IA)	Claims	<u>1-3 (partially), 4 and 5</u>	YES
	Claims	<u>1-3 (partially)</u>	NO

## 2. Citations and explanations (Rule 70.7)

D1 WO 99/25189  
 D2 Steven S. ZUMDAHL; Chimie (chimie des solutions).  
 D3 EP 760,482  
 D4 US 6,036,666

## NOVELTY

The document D1 (WO99/25189) discloses use of pH indicators in concentrate to prepare an agricultural compound. This document discloses only synthetic pH indicators, such as methyl red, resorcin blue, 2,5-dinitrophenol and chlorophenol red (column 3, lines 29-45). There is no indication that the pH indicator could be a naturally occurring pH indicator. As such, claims 1 to 5 present novelty over D1 and comply with Article 33(2) PCT.

## INVENTIVE STEP

The problem facing the inventor was the possible environmentally detrimental effects of non-natural substances in agriculture, such as the ones disclosed in D1. The inventor circumvented the problem by replacing the synthetic pH indicator with naturally occurring pH indicators, such as those obtained from extracts of grape skins, cabbage or lichen. Nevertheless, this does not represent an inventive step, because the skilled person in the domain would have been lead to the same conclusion, because natural pH indicators are well-known in the field of chemistry. The textbook from Zumdahl (D2) discloses such naturally occurring pH indicators. D1 disclosed (page 12, line 22) that "other pH indicators may also preferably be used, the choice being dictated by the (...) toxicity of the indicator". Furthermore, D3 and D4 disclose examples of industrial applications of naturally occurring pH indicators obtained from, respectively, red cabbage (D3); and lichen (D4). Therefore, using a naturally occurring pH indicator to replace a non-natural pH indicator would not have required inventiveness, because the problem to be solved was to find a replacement for non-natural pH indicators and the natural pH indicators are well-known. Thus, claims 1 to 5 lack an inventive step and do not comply with Article 33(3) PCT.

## INDUSTRIAL APPLICABILITY

It is doubtful that all cabbages, such as the ones that are not red, would be useful in the present invention. Therefore, claims 1 to 3 partially do not comply with Article 33(4) PCT.

The subject matter of claims 1 to 3 (partially), 4 and 5 is considered to be industrially applicable and is thus fulfilling the requirements of Article 33(4) PCT.

**INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**International application No.  
PCT/CA2004/001555**Box No. VIII      Certain observations on the international application**

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

Claim 1 does not comply with Article 6 PCT, because "extract from grapes" is not supported by the description. "Extract from grape skins" would be supported by page 3, line 5.

Claim 2 does not comply with Rule 6.3(a) PCT the expression "naturally occurring pH indicator" does not define the technical feature that solves the problem facing the inventor, but the desired results. Page 3, line 5, of the description indicates that the naturally occurring pH indicator is selected from the group consisting in extracts of grape skins, cabbage or lichen.

Claim 3 does not comply with Article 6 PCT, because "lecithin" is not supported by the description as a natural pH indicator. "Lichen" would be supported by page 3, line 5.

Claim 5 does not comply with Article 6 PCT, because the units of the percentage are not defined.

The last paragraph of page 5 of the description does not comply with Article 6 PCT, because it implies that the protection sought goes beyond the scope of the claims.

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